

**INVERTER CIRCUIT HAVING SWITCHING DEVICE WITH GATE DRIVEN
BY HIGH-VOLTAGE INTEGRATED CIRCUIT**

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ABSTRACT OF THE DISCLOSURE

[00142] Provided is an inverter circuit including a switching device which performs a switching operation corresponding to a gate control signal input to a gate terminal, converts an input DC to an AC, and outputs the AC; an HVIC which inputs the gate control signal to the gate terminal of the switching device; a controller which inputs to the HVIC a control signal for enabling the HVIC to generate the gate control signal; a bootstrap circuit which transmits energy to a high-side region of the HVIC; and an impedance cell which is located between the HVIC and one terminal of the switching device to reduce voltage drop of the high-side HVIC.